

CLAIMS

1. An imaging apparatus for generating still picture data by receiving an optical signal of a subject, comprising:

5 an imaging element that generates a still picture by exposing with an optical signal of the subject;

a plurality of imaging lenses that collect the optical signal of the subject and focus an image on the imaging apparatus;

10 a correction lens that is movable on a plane vertical to an optical axis of the imaging lenses so as to correct image blurring formed on the imaging element;

a measuring section that measures shake of the imaging apparatus;

15 an instruction section that instructs start of recording a still picture generated by the imaging element; and

20 a lens controller that selectively performs a center stop control and a lens correction control, the center stop control controlling the correction lens position so as to stop the correction lens at an optical axis center position which is a position of the correction lens at which an optical axis of the imaging lenses coincides with an optical axis of the correction lens, the lens correction control controlling the correction lens position so as to correct blurring of the image formed on the imaging element on the basis of the measuring result of the measuring section,

25 wherein the lens controller performs the center stop control until receiving an instruction for start of recording from the instruction section, and performs the lens correction control after the start of exposure in the imaging apparatus, and

30 the lens controller returns the correction lens to the optical axis center position before receiving an next instruction

for start of the next recording from the instruction section after completion of the exposure to the imaging element, and then performs the center stop control on the correction lens.

- 5 2. The imaging apparatus of claim 1, further comprising:
 image processor that processes the image by receiving
 the still picture transferred from the imaging element,
 wherein the lens controller controls the correction lens
 to return the correction lens to the optical axis center position,
10 before completion of transfer of a still picture from the imaging
 element to the image processor after completion of exposure in the
 imaging element.
- 15 3. The imaging apparatus of claim 1, wherein the lens
 controller starts the lens correction control earlier than start
 time of exposure of imaging element by time necessary for
 controlling the correction lens stably.
- 20 4. The imaging apparatus of claim 1, wherein the lens
 controller includes a reference value updating function for updating
 a reference value used for judging the measuring result of the
 measuring section, and keeps the reference value updating function
 inactivate while controlling the lens correction.
- 25 5. The imaging apparatus of claim 1, further comprising:
 an integrating section that integrates the result of the
 measuring section,
 wherein the lens controller calculates a virtual
 position of the correction lens on the basis of the output of the
30 integrating section, and performs the lens correction control

according to the virtual position, and the integrating section adjusts a gain on the integration of the result of measuring section according to the virtual position of the correction lens calculated by the lens controller.

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6. The imaging apparatus of claim 5, wherein when a region of shake frequency of the imaging apparatus is smaller than a predetermined value, the integrating section adjusts the gain so that the gain is constant when the virtual position of the correction lens is within a predetermined range from the optical axis center position, , and that the gain decreases along with the distance from the optical axis center position when the virtual position of the correction lens is outside of the predetermined range.

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7. The imaging apparatus of claim 6, wherein the integrating section adjusts the gain so that the gain increases along with increase of the shake frequency when the shake frequency of the imaging apparatus is smaller than the predetermined value, and that the gain is constant when the shake frequency of the imaging apparatus is more than the predetermined value.

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8. A control method of an imaging apparatus for generating still picture data by receiving an optical signal of a subject, the imaging apparatus comprising an imaging element that generates a still picture by exposing with an optical signal of the subject, a plurality of imaging lenses that collect the optical signal of the subject and focus an image on the imaging element, and a correction lens movable on a plane vertical to an optical axis of the imaging lenses to correct image blurring formed on the imaging element,

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the control method comprising:

measuring shake of the imaging apparatus;

receiving an instruction for start of recording a still picture generated in the imaging element;

5 performing a center stop control until receiving an instruction for start of recording the still picture, the center stop control controlling the correction lens position so as to stop the correction lens at an optical axis center position which is a position of the correction lens at which an optical axis of the
10 imaging lenses coincides with an optical axis of the correction lens;

performing a lens correction control after the start of exposure in the imaging apparatus, the lens correction control controlling the correction lens position so as to correct blurring
15 of the image formed on the imaging element on the basis of the measuring result; and

returning the correction lens to the optical axis center position before receiving a next instruction for start of next recording after completion of the exposure to the imaging element,
20 and then performing the center stop control on the correction lens.